

**CRITERIA TO VALIDATE CONTRACTOR RESPONSE TO ACTIONS
INVOLVED WITH LESSONS LEARNED
AT HANFORD'S PLUTONIUM RECLAMATION FACILITY**

A. EMERGENCY MANAGEMENT DECISION MAKING

1. Train key management personnel on emergency management decision making.

A.1.a Verify all key management personnel have either attended training conducted on October 20/21 or viewed video tape of training session.

2. Conduct emergency exercises to validate that above training emphasizes conservative judgements about a given situation.

A.2.a Evaluate contractor performance in a CPX exercise conducted to validate objectives contained at end of criteria list. Forward summary evaluation and judgement of whether each objective was met to EMPO.

B. PROTECTIVE EQUIPMENT AND STAFFING

1. Confirm availability of certified/qualified personal protective equipment sufficient to deal with all onsite hazards.

B.1.a Evaluate if contractor inventory of personal protective equipment is sufficient for all first responders that may be exposed to hazardous materials (fire, hazmat, medical, and security personnel).

B.1.b Evaluate if contractor inventory of personal protective equipment is sufficient to support adequate onsite monitoring for releases of radiological or chemical hazards. Adequate is interpreted as two onsite teams of three personnel each.

B.1.c By performing onsite spot checks (minimum of 2), verify that personal protective equipment is in ready access, properly maintained, and certified/qualified.

2. Confirm availability of field monitoring equipment sufficient to deal with all onsite hazards.

B.2.a Evaluate if contractor inventory of monitoring equipment (chemical and radiological) is sufficient to perform onsite monitoring of potential releases at the site (Minimum requirement of two teams).

B.2.b By performing onsite spot checks (minimum of 2), verify that monitoring equipment is operational and is within its calibration schedule.

3. Confirm availability of qualified staff to readily respond to accidents and post-accident activities.

B.3.a Evaluate contractor roster of industrial hygiene and health physics personnel to determine if it is adequate to support field operations.

B.3.b Review contractor procedures for activating field support and medical personnel during an emergency. If personnel are not present on site 24 hours a day, can assistance be obtained within one hour?

B.3.c By performing onsite spot checks of records (minimum of 2), verify that response team members have current certifications in all necessary areas (e.g., SCBA qualification, respirator fit, monitoring techniques).

C. PROTECTIVE TREATMENT OF PERSONNEL

1. Identify emergency procedures that address timely medical attention for injured or potentially exposed personnel.

C.1.a Verify by inspection that contractor has emergency medical procedures that call for prompt response to injured or exposed personnel.

2. Identify policy and procedures that address care and continued monitoring of affected personnel post-incident.

C.2.a Verify by inspection that contractor has emergency medical procedures that call for follow-up monitoring and evaluation of exposed personnel after the incident has been mitigated.

3. Review policy and procedures identified above for adequacy with local medical authorities and workers. This review should include participation by onsite workers and local medical authorities.

C.3.a Verify that emergency medical procedures have been coordinated with onsite safety and health personnel as well as local medical authorities. Local medical authorities are interpreted to be Oak Ridge Methodist Medical Center, REAC/TS, and University of Tennessee Medical Center/LIFESTAR for Oak Ridge sites. For sites outside Oak Ridge, the nearest hospital can be used. Coordination can be accomplished by joint meeting or paper review and concurrence.

4. Conduct exercises to validate implementation of procedures for notification and methods for controlling sheltering of workers in remote locations (onsite and offsite).

C.4.a Evaluate contractor performance in a CPX exercise conducted to validate objectives contained at end of criteria list. Forward summary evaluation and judgement of whether each objective was met to EMPO.

5. Train security, medical, and other emergency responders concerning recognition of potential accidents involving exposure to onsite hazards. Training should incorporate any post-traumatic effects.

C.5.a By inspection of training records, verify that security, medical, and other responders (hazmat teams, IH's, HP's) have been trained on the potential onsite hazards and what immediate and post-accident symptoms can be anticipated.

D. HAZARDS INFORMATION

1. Identify procedures that provide local medical facilities with available information on chemical and radiological hazards.

D.1.a Verify by inspection that the contractor has procedures that have provisions for providing local medical facilities with hazard information (e.g. MSDS or ERPG sheet) during an accident with potential exposure of personnel.

2. Identify procedures that provide qualitative and quantitative exposure information to local medical facilities for personnel exposed in the event of an accident.

D.2.a Verify by inspection that the contractor has procedures that have provisions for providing local medical facilities with hazard information during an accident with potential exposure of personnel, to include qualitative and quantitative exposure information.

3. Conduct outreach with local medical facilities concerning chemical and radiological hazards existing onsite.

D.3.a Verify from records that the contractor has met with or provided a summary of hazards that could potentially involve personnel exposure that would be treated at the local medical facility.

4. Conduct exercises to validate adequacy of the above procedures.

D.4.a Evaluate contractor performance in a CPX exercise conducted to validate objectives contained at end of criteria list. Forward summary evaluation and judgement of whether each objective was met to EMPO.

5. Conduct exercises to test the capability to provide timely and accurate information to local medical facilities for a variety of potential accidents involving injured or potentially exposed personnel.

D.5.a Evaluate contractor performance in a CPX exercise conducted to validate objectives contained at end of criteria list. Forward summary evaluation and judgement of whether each objective was met to EMPO.

Minimum objectives to be evaluated during CPX exercise:

1. Given an event involving the release of hazardous materials and the potential exposure of personnel, demonstrate conservative decisions regarding protective actions and treatment of personnel.
2. Given an event involving the release of hazardous materials and potential exposure of personnel, demonstrate the capability to effectively and promptly notify workers in affected areas and to ensure ingress and egress from the affected area is controlled.
3. Given an event involving the release of hazardous materials and potential exposure of personnel, demonstrate the capability to provide timely and accurate information to local medical facilities.
4. Given an event involving the release of hazardous materials and potential exposure of personnel, demonstrate the proper use of Emergency Action Levels to conservatively categorize/classify the event and determine initial protective actions necessary.
5. Given an event involving the release of hazardous materials and potential exposure of personnel, demonstrate the timely notification of offsite agencies in accordance with DOE O 151.1 and Secretarial Directives.

United States Government

Department of Energy
Oak Ridge Operations Office

memorandum

DATE: September 25, 1997
REPLY TO:
ATTN OF: DP-801:BDavis

SUBJECT: **LESSONS LEARNED FROM THE EMERGENCY RESPONSE TO THE MAY 14, 1997
EXPLOSION AT HANFORD'S PLUTONIUM RECLAMATION FACILITY**

TO: J. D. Jackson, Acting Site Manager, Y-12 Site Office, DP-81
E. G. Cumesty, Assistant Manager for Laboratories, ER-10
J. S. Van Fossen, Acting Manager, ETTP, EW-96
D. T. Kearney, Engineering Services Division, CE-51
G. A. Mills, Programs Branch, ORNL Site Office, ER-111
J. C. Hodges, Site Manager, Paducah Site Office, ER-22
E.W. Gillespie, Site Manager, Portsmouth Site Office, EF-21
S. H. McCracken, Site Manager, Weldon Spring Site Office, EW-94
Jerry Conley, TJNAF Site Office, ER-111
W. M. Seay, Site Manager, FRSD, EW-93

As a result of recent issues raised during the investigation of the emergency response to the accident at the Hanford Plutonium Reclamation Facility on May 14, 1997, the Operations Offices have been requested to apply these lessons learned in their emergency management programs to enhance the ability to respond to potential accidents. The attached memorandum (see attachment 1) delineates the expected actions. We are coordinating the Oak Ridge Operations Office (ORO) response to the memorandum.

Attachment 2 delineates the actions required of the ORO contractors to support the response to the memorandum. We request that your contractor take the necessary steps to complete the actions described in Attachment 2 by the dates indicated. Where necessary to ensure worker and/or public health and safety, compensatory measures should be put in place until corrective actions are completed. It is important to note that where corrective actions are required to ensure conformance with the action item, such corrective actions must be completed by March 31, 1998. We will work with your staff to determine the approach to validation of the contractor actions. We would appreciate receiving a status report by action item by December 19, 1997.

If you have any questions regarding this issue, please contact Steve Johnson at (423) 576-9740.

Bobby Davis, Manager
Emergency Management Program Office

Attachments

cc w/atts.:

John Pearson, Y-12 Site Office, DP-82

Tom Youngblood, ETTP Site Office, EW-96

Mark Robinson, ORNL Site Office, ER-10

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W. J. Derossett, ORNL, Bldg. 5000, MS-6346

Tom McWilliams, East Tennessee Mechanical Company

Attachment 2

Actions Required of ORO Contractors

Emergency Management Decision Making	
Action	Date
1. Train key emergency management personnel on emergency management decision making.	10-24-97
2. Conduct emergency exercises to validate that above training emphasizes conservative judgements about a given situation.	3-31-98

Protective Equipment and Staffing	
Action	Date
1. Confirm availability of certified/qualified personal protective equipment sufficient to deal with all on-site hazards.	10-10-97
2. Confirm availability of field monitoring equipment sufficient to deal with all on-site hazards.	3-31-98
3. Confirm availability of qualified staff to readily respond to accidents and post-accident activities.	3-31-98

Protective Treatment of Personnel	
Action	Date
1. Identify emergency procedures that address timely medical attention for injured or potentially exposed personnel.	10-31-97
2. Identify policy and procedures that address care and continued monitoring of affected personnel post-incident.	10-31-97
3. Review policy and procedures identified above for adequacy with local medical authorities and workers. This review should include participation by onsite workers and local medical authorities.	12-1-97
4. Conduct exercises to validate implementation of procedures for notification and methods for controlling sheltering of workers in remote locations (on-site and off-site).	3-31-98
5. Train security, medical, and other emergency responders concerning recognition of potential accidents involving exposure to on-site hazards. Training should incorporate any post-traumatic effects.	3-31-98

Hazards Information	
Action	Date
1. Identify procedures that provide local medical facilities with available information on chemical and radiological hazards.	12-1-97
2. Identify procedures that provide qualitative and quantitative exposure information to local medical facilities for personnel exposed in the event of an accident.	12-1-97
3. Conduct outreach with local medical facilities concerning chemical and radiological hazards existing on-site.	3-31-98
4. Conduct exercises to validate adequacy of the above procedures.	3-31-98
5. Conduct exercises to test the capability to provide timely and accurate information to local medical facilities for a variety of potential accidents involving injured or potentially exposed personnel.	3-31-98

December 11, 1997

To: Terry Olberding, Nuclear Safety Division, SE-33

From: Steve Johnson, Emergency Management Program Office, DP-801

Subject: Status of ORO Contractor's Assessment of Actions Associated With Secretary Peña's Lessons Learned Memorandum

In response to Secretary Peña's memorandum referenced above, the Oak Ridge Operations Office (ORO) Emergency Management Program Office (EMPO) provides the following status information regarding the action items at contractor sites for which we are responsible.

On September 25, 1997, EMPO transmitted a memorandum to the DOE Site Offices/Contracting Officer Representatives requesting specific actions of each site's contractor to support the response to Secretary Peña's memorandum on "Lessons Learned from the Emergency Response to the May 14, 1997 Explosion at Hanford's Plutonium Reclamation Facility". Specific actions required of each ORO contractor focused on four major areas: Emergency Management Decision Making, Protective Equipment and Staffing, Protective Treatment of Personnel, and Hazards Information to the Local Medical Community. Dates for completion of each activity were provided ranging from the middle of October 1997 to the end of March 1998. We also recommended, if it is necessary to ensure worker health and safety, that compensatory measures be implemented until corrective actions can be completed.

On October 20-21, 1997, the DOE Headquarters, Office of Emergency Management conducted a training course entitled "Effective Emergency Management Decision Making With Incomplete or Unconfirmed Information". Approximately 100 individuals (federal staff and contractors) attended this training. The training was also videotaped to accommodate the targeted members of the Emergency Response Organization who were unable to attend. Copies of the videotape have been provided to each contractor site to utilize in their training makeup sessions. A Full Participation Exercise is scheduled to be conducted at the Oak Ridge National Laboratory in April, 1998 that will validate the decision making and conservative judgement capabilities. Other contractor sites are also scheduling exercises to validate the training and other requirements identified in the Secretary's memorandum.

On November 24, 1997, the ORO EMPO developed and provided to the DOE Site Office and contractor emergency management representatives a standard set of criteria that will be used to validate a selective sampling of each contractor's response to their status of the actions. The criteria was established to provide the necessary framework to ensure a consistent approach is maintained for all contractor sites.

The contractor sites that provide their own emergency response assets have confirmed the availability of certified/qualified field monitoring and personal protective equipment sufficient to deal with on-site hazards. The contractor sites that obtain all or part of their emergency response

assets from external sources provide hazard assessment information to these agencies to ensure capabilities (equipment and personnel) are available to respond to onsite emergencies. In addition, these agencies periodically visit the DOE site and are participants in their emergency exercises.

With respect to protective treatment of personnel, most contractor sites have identified emergency procedures that address timely medical attention and continued care of personnel of injured or potentially exposed personnel. During emergencies, quantitative and qualitative exposure information is provided to the local medical community. The Y-12 Plant and East Tennessee Technology Park (ETTP) are assessing their emergency policies, medical procedures and interfaces with the local medical community.

The Portsmouth Gaseous Diffusion Plant distributes their emergency plan, which summarizes their onsite chemical and radiological hazards, to their local medical facilities. Other sites such as ORNL provide regulatory reports that describe radiological and chemical hazards that exist onsite. Y-12 and ETTP are assessing the types of documentation that will be distributed to the local medical community.

In summary, many of the actions requested from Secretary Peña's memorandum have been accomplished or are being addressed. The criteria discussed above will be utilized to validate contractor actions. We do not perceive any difficulties in meeting these requirements by March 31, 1998.